ATTACHMENT 2

The following information are provided per Attachment I dated 10/28/2021.

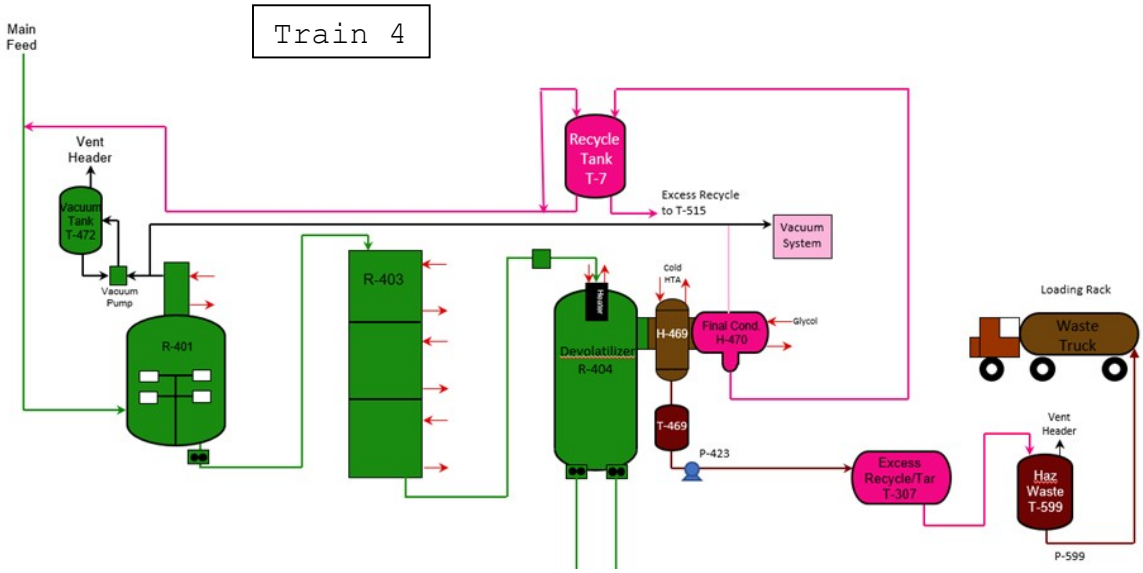
EPA Request #1:

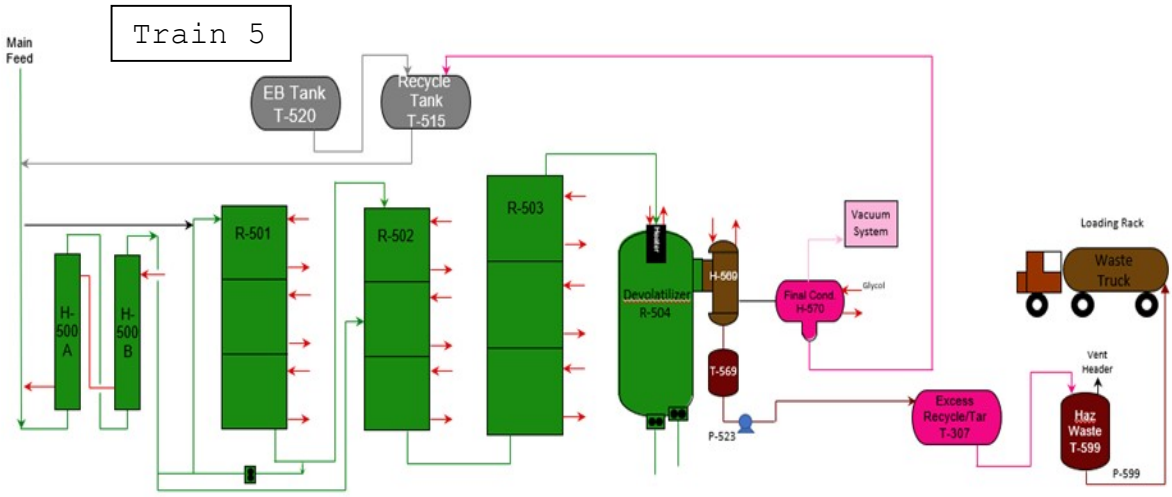
1. On September 2, 2021, AmSty responded to an EPA August 20, 2021, e-mail request for information regarding vessels T469 and T569. The information provided is not sufficient to understand how the partial condenser and condenser function, what materials from the manufacturing process are being recycled, and exactly how the waste sent to the hazardous waste accumulation tank, T307, is generated. EPA requests AmSty to provide a written description and supporting figures which helps EPA better understand how each type of condenser functions. Note: If this information will be classified by AmSty as Confidential Business Information, the information should be submitted to EPA via EPA's online secure file transfer service.

AmSty's Response to Request #1:

1. The response to Request #1 below is provided. This information was developed and reviewed by the following Amsty personnel: Environmental Compliance Manager, Technology Manager, Operations Manager, Process Safety Engineer and Environmental Specialist. The source of the information is the AmSty Polystyrene process description and Process flow diagrams.

The AmSty polystyrene production process starts with styrene monomer feeding into series of reactors to convert styrene to polystyrene polymer by thermal and chemical reactions. The polystyrene (PS) polymer stream then goes through a heat exchanger and into the vacuum Devolatizer to flash off the unconverted materials (styrene, ethylbenzene, and tars which is mainly dimers, trimers, and oligomers).





The flash-off materials from the Devolatizer are recovered through a condenser system which contains a partial condenser (H-469/H-569),a final condenser (H-470/H-570), and a knockout tank T-469/T-569 (see above flowcharts). Vapors travel through a spool piece from the Devolatilizer (R-404/R-504) to the partial condenser, H-469/H-569. Cool heat transfer fluid is circulating through the tube side of the heat exchanger to condense the heavier components (mostly dimers, trimers, and oligomers) from the vapor stream. The heavier components, or tars, then drop into a knockout tank, T-469/T-569. The remaining vapors continue on to the chilled glycol cooled final condenser (H-470/H-570). This final condenser liquefies styrene and ethyl benzene vapor which is then pumped into the recycle storage tanks (T-7/T-515) and fed back to process. All of the above listed equipment are part of the manufacturing processing unit to produce the final polystyrene product. T-469 and T-569 are included in the AQMD Train 4 and Train 5 Permit To Operate as equipment required for the "Polystyrene Resin Manufacturing System". Attachment "G30184 Train 5 Polystyrene Manufacturing System" is included.

T-469 and T-569 are a part of the condensing system for a few specific reasons. First is the requirement to have an area for the condensed liquid to accumulate. If the liquid started accumulating in the condenser itself, then the capacity and effectiveness of the condenser decreases. Secondly the liquid level in T-469 and T-569 provides a seal between the vacuum part of the condensing system and the slightly above atmospheric pressure in T-307 and T-599 to prevent vapors entering the condenser. Third, a liquid level in T-469 and T-599 helps reduce the possibility of cavitation leading to failure of a pump and air entering the condenser. Therefore, the level in the tank is kept between 24% - 35% pumping a few times a day to avoid overfilling and running empty.

Vapor leakage into the system is undesired for many reasons including optimizing the partial and final condenser capacity, product property performance, and most importantly to avoid a decrease in the vacuum leading to a failure of flashing the styrene and ethyl benzene. If enough vacuum is lost, it results in an immediate SIS trip of the unit operation for process safety concerns.

40 CFR 261.4(c) states that "Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated . . . in a manufacturing process unit .

. is not subject to regulation under parts 262 through 265, 268, 270, 271 and 124 of this chapter or to the notification requirements of section 3010 of RCRA until it ***exits*** *the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing". The polystyrene production process includes feed tanks, reactors, devolatizers, partial condensers and final condensers along with associated equipment. All of this equipment is part of the manufacturing process unit. The material that exits -469 and T-569 is considered waste and equipment handling this material is included in the site LDAR program under 40 CFR 265 Subpart BB.*

EPA Request #2:

2. Provide a list of equipment that is identified by AmSty as inaccessible equipment.

AmSty's Response to Request #2:

2. AmSty's LDAR contractor, Montrose Inc., provided the list of inaccessible equipment.
The list of equipment that is identified by as inaccessible equipment is included in Attachment "Request_2_AmSty_IA_BB_inventory".

EPA Request #3:

3. Provide a copy of the tank certification for each of the hazardous waste accumulation tanks: T307 and T599 (see 22 CCR §§ 66262.34(a)(1); 66265 Article 10 [40 CFR§§ 262.17(a)(2); 265 Subpart J]).

AmSty's Response to Request #3:

3. AmSty's contractor, HMT Inspection, performed and provided T-307 and T-599 tank certifications.

The copies of T-307 and T-599 tank certifications are included in Attachments "Request_3 Vessel T-307 Final Report 2017-07-21" and "Request_3 Vessel T-599 Final Report 2017-07-21".

EPA Request #4:

4. Provide copies of daily tanks inspection records prepared by AmSty staff from January 1, 2021, to July 16, 2021, for hazardous waste accumulation tanks T307 and T599 (see 22 CCR§§ 66262.34(a)(1); 66265.195 [40 CFR§§ 262.17(a)(2); 265.195])

AmSty's Response to Request #4:

4. AmSty's Operating Technicians performed and recorded Daily Hazardous Waste Accumulation Tank inspections from January 1, 20201 to July 19, 2021.

The copies of T-307 and T-599 daily tank inspection records are included in Attachments "Request_4_2021_T-307 01-01-21 to 07-19-21 daily inspection" and "Request_4_2021_T-599 01-01-21 to 07-19-21 daily inspection".